



MEMO: Deer Impacts to Ecology and Food Security

TO: Burlington Conservation Board

FROM: Dan Cahill, Land Steward BPRW; Patrick Dunseith, Land Manager, Intervale Center

### **Stating the Dilemma**

Populations of white tail deer in the Burlington Intervale are at a level that significantly impacts local farms and community gardeners, and poses the largest threat to the successful establishment of native tree plantings in the entire lower Winooski Valley.

As the City further prioritizes nature based solutions and the role of local food systems as part of the collective response to climate change and countless other challenges, the over-population of deer in the Intervale is an ever present issue that will continue to threaten numerous goals and initiatives of the Intervale Center, BPRW and the Burlington community.

At the Intervale Center (IC), farmers have progressively implemented higher levels of deer deterrents and exclusions. Presently, all vegetable farms rely on three or five strand electric fences to keep deer from entering their fields and decimating crops. Unfortunately, these fencing systems have been slowly losing efficacy as resident populations have been “trained” to the fencing. If these strategies become ineffectual, Intervale farms will have little to no options for excluding deers and may be faced with an inability to grow the many commonplace crops that are palatable to deer. The inability of farmers to utilize a depredation permit and protect their fields from nuisance deer has been a recurring issue for Intervale farmers for many years.

Crop losses can vary widely and farmers generally see the most pressure in the fall and in western fields closer to the wetlands and WMA, but no field is free from deers' impact. Estimates from Intervale farms can range from \$6-8000 losses in a single carrot crop, to 5-10% of annual revenue. ICF, the largest Intervale farm, estimates it spends \$3000-3500 on exclusion fencing materials and related labor each year. The Conservation Nursery estimates losses of \$8000 dollars a year in sales as well as stunted growth in bare-root stock.

Similarly, the IC and BPRW have witnessed significant impact to regenerative plantings. In an assessment of the regenerative plantings at McKenzie park, field researchers found that 71% of the trees sampled in their study (640 in total) were browsed by deer. New for this season, staff are attaching bar soap wrapped in cheesecloth as a hopeful deterrent.

Observations from Intervale growers and naturalists also suggest the problem continues to escalate as deer browse is now affecting less palatable crops and tree species that were previously passed over. Browse on non-native invasives and a shifting diet suggest population levels could surpass the carrying capacity of the land and could threaten the health of the herd as well.

### **Current Conditions**

The Intervale Center has observed signs of deer hunting already present on the landscape (broken arrows, deer blinds, trash). Identifying or contacting these hunters has been a challenge and ignoring them presents a danger to the public. A legal and enforceable framework would allow us to make contact with and direct these efforts and avoid potentially dangerous or antagonistic interactions with covert hunters.

The Intervale Center has made connections with VT Fish & Wildlife as well as Shelburne Farms to begin understanding the logistic, safety and cultural challenges to implementing a controlled hunt on publicly accessible private land. VTFW has been extremely supportive and sees an opportunity to work closely with relevant stakeholders as it establishes and supports suburban hunting areas such as Burlington. Their support could extend to public outreach and education, and ongoing monitoring and assessment. The Intervale Center has begun outlining elements of a draft bow-hunting plan that emphasizes safety and minimizes impact on existing public amenities.

The Burlington City Code of Ordinances does not currently allow for discharge of firearms and only allows for the use of bow and arrow in designated “archery zones”. While there is no explicit prohibition of hunting, these two ordinances effectively eliminate any possibility of deer hunting in the Burlington Intervale. The ordinance allowing for the creation of designated archery zones has been interpreted to be only for the development of recreational archery practice areas and not for the purposes of hunting. It is our presumption that hunting in the Intervale would require a City Council resolution and amendment to the code of ordinances.

### **What are we asking of the Conservation Board?**

The Intervale and The City are seeking the authority to empower appropriate parties to perform adaptive management practices in the form of deer depredation as early as next growing season. We would like the Conservation Board to discuss this pressing issue, and ultimately make a recommendation to the City Council by the spring of 2020. Ideally this recommendation would help pave the way for any needed policy changes, long term studies, and the larger public education frameworks to achieve them.